

Abstract of the Disclosure

An apparatus and a method for performing mixed motion estimation based on a hierarchical search are provided. In the method, motion vectors of previous image data are received. The median value of the motion vectors is obtained. Current image data is received. Motion of the current image data is compensated for based on the median value of the motion vectors. SAD values of the previous image data are received and the maximum value of the SAD values is obtained. The motion compensation result is compared with the maximum value of the SAD values. Motion estimation of the current image data is skipped and the motion compensation result is output if the motion compensation result is smaller than the maximum value of the SAD values. Motion estimation for the current image data is performed if the motion compensation result is greater than or equal to the maximum value of the SAD values, and the motion estimation result is output.